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3115 Seventh Street  
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23 July 1993

Re ET Docket No. 93-82

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JUL 28 1993

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

Dear Ms. Searcy:

This letter is written in addition to my first letter dated 1 July 1993. Please refer to it for basic references, and my personal comments about ET Docket No. 93-82 (ANSI/IEEE C95.1-1992).

Yesterday, 22 July 1993, I made a simple calculation and empirical measurement concerning *contact radiofrequency current*. The proposed ANSI/IEEE standard proposes to limit this current to 45mA in the uncontrolled environment for frequencies ranging from 0.1 to 100 MHz.

It occurred to me that low-power 27 MHz Citizens Band walkie-talkies could possibly exceed this limit. Using the relationship

$$\text{Power} = I^2 R \text{ or } I = \sqrt{P/R}$$

it can be shown that 2.5 Watts of output power will result in approximately 224 mA of contact current assuming an antenna system (human operator included) series-resistance of 50 ohms. This is almost five times the proposed standard!

Using a Realistic model TRC-217 5-Watt 40-channel walkie-talkie (2.5 Watts output) and a Simpson model 37 radio frequency ammeter (150 mA FS), I measured a contact current of approximately 70 mA into my right hand. Since this level is obviously in excess of the new proposed ANSI standard, what are we to do besides prohibiting the use of walkie-talkies and other devices?

With this in mind, manufacturers must begin arguing their product's engineered safety in the court systems--smaller ones will likely find it impossible because of costs and potential litigation. Many American (and foreign) radio products might disappear from store shelves if some categorical exclusions are not allowed with the implementation of ANSI/IEEE C95.1-1992.

In conclusion, I have failed to witness any rampant deaths caused by radio transmitting devices during my lifetime; old age has usually been the cause.

Sincerely yours,

David Smith Forsman

David Smith Forsman  
broadcast technician and radio amateur  
enclosure

National Geographic

40 Watt 120 Volt light bulb: